



Conserving The Nature of America

New Site-Specific Fish Mercury Data for Four Eastern North Carolina National Wildlife Refuges

Mercury is a common pollutant of the nation's waters, many of which are subject to public health advisories recommending limited fish consumption due to elevated mercury. Mercury above levels of concern in fish prompted the North Carolina Division of Public Health to issue consumption advisories for several freshwater fishes in eastern North Carolina. Historic fish data collected by the North Carolina Division of Water Quality and the U.S. Fish and Wildlife Service from eastern North Carolina National Wildlife Refuges documented mercury in fish at or above levels of concern, but there were no current data for the refuges. Based on this concern, updated information on mercury in important recreational fish species was collected from four refuges between 2004 and 2006.

Our final report* concludes that mercury concentrations in these refuges' catfish and sunfish species (excluding bass) indicates they are generally safe to eat -- concentrations of mercury were lower than the State action level for issuing public health consumption advisories. Half of the perch and 84 percent of the largemouth bass fillets exceeded levels of concern.

* **Ward, SE. 2008. Site-Specific Fish Tissue Mercury at Four Eastern North Carolina National Wildlife Refuges. U.S. Fish and Wildlife Service. USFWS, Raleigh, NC**



Largemouth bass samples collected from Pee Dee National Wildlife Refuge.

The following are highlights of the report:

- 305 fillets were collected from Alligator River, Mattamuskeet, Pocosin Lakes, and Pee Dee NWRs.
- Bluegills caught on refuges are safe to eat, consistent with the State's fish consumption advice.
- The current legal size limit for largemouth bass (14 inches, or 35.6 cm) precludes consumption of smaller individuals caught in refuge waters that are lower in mercury. Only catch and release fishing or limited consumption (consistent with the State's advisory) is advised.
- Insufficient perch data are available to determine a size threshold for safe public consumption. Future data collection targeting perch species is recommended.
- The statewide fish consumption advisory issued by the NC Division of Public Health (<http://www.epi.state.nc.us/epi/fish/current.html>) should be followed by refuge visitors.
- An evaluation of the toxicological significance of fish tissue mercury levels to fish-eating birds indicated mercury concentrations in whole fish frequently exceeded levels of concern. More whole fish sampling and wildlife risk assessment should be done if wildlife mercury impacts are suspected.

The report is available from the USFWS at: <http://www.fws.gov/nc-es/ecotox/ecotoxpub.html>. For more information, contact Sara Ward, U. S. Fish and Wildlife Service, Raleigh, NC (Sara_Ward@fws.gov or 919/856-4520 x.30).